The Problem

• The climate is changing and the scale and impact could be much greater than anticipated.

• Codes are based on historical information that might no longer be relevant in guiding the design of infrastructure that protects public health and safety.

• The built environment is not currently funded to meet the challenges of climate variability.

The Concern

• There are new tools to model and assess climate risk which indicate that climate adaptation strategies have to be given greater attention.

• Implementation strategies have been limited and largely voluntary.

• There are policy decisions at the intersection of resilience and finance and seem not to be understood.
Schinnerer School of Risk Management Webinar
Design Liability in a Changing Climate

The Situation

- The prevailing practice is to design and build according to the climate patterns of the past and to meet the minimum standards necessary.
- The need is to design to those patterns observed or anticipated imminently.
- The investment seems only to be made for projects where long-term usability or security are desired.

Your Issues

You must understand the difference between contractual obligations and the professional duty of design professionals and their firms established by the codes of ethics and state licensing laws.

Your Issues

You must be able to distinguish how codes and standards set a minimum design level that at times must be exceeded to meet the standard of care.
Your Issues
You must recognize that the shared knowledge of the profession and differing – and evolving – regulations by government entities can change the standard of care for resilient design. This is accomplished by looking at case law, studies, and standards that have not yet been accepted as code requirements.

Your Issues
You must realize that negotiation techniques and alternative contract language have a vital (but not absolute) role in protecting the design professional’s duty to meet professional and ethical obligations to design adaptive and resilient projects when a client does not want to acknowledge or fund a design that must meet a higher standard of care.

Adaptive and Resilient Design
Adaptive and Resilient Design

The intentional design of buildings and communities for survival, recovery, and stability in the face of climate change.

This allows infrastructure to be built now with the understanding that the underlying design assumptions might change.

Adaptive and Resilient Design

Design firms are often facing a major conflict between client demands for minimum investment based on antiquated codes and the realities of the need for more costly adaptive and resilient designs to meet climate variability.

Adaptive and Resilient Design

• To satisfy regulations on project resiliency
• To meet the standard of care
  • Recognized changes – duty to exceed codes because of project use or location
  • Anticipated variables – designing in a level of resiliency for climatic events
Adaptive and Resilient Design

• To respond to client concerns
  • Physical protection as defined by client
  • Durability based on client’s requirements
  • Longevity realistic to the capital asset
  • Restoration if climate variability causes unanticipated damage

Adaptive and Resilient Design

Current disaster relief and recovery policies allow for and even encourage investors to meet only minimum standards and unprepared communities to build unwisely and subsequently rely upon federal help when disasters occur.

Understanding the American Legal System and Professional Services
Design Practice and the Law
Two Things about American Law:

- The law protects the reasonable expectations of all parties.
- You are responsible for the foreseeable costs of your wrongful conduct.

Design Practice and the Law
Two Things about Design Practice:

- It is all about trade-offs.
- The trade-offs construction are about money, time, and quality.

Design Practice and the Law
When you provide design services you must meet:

- The contractual expectations of your client,
- The statutory expectations of licensing and practice laws,
- The public expectations that your design does not endanger health, safety, and welfare, and
- Tort law expectations that your services meet the standard of care applicable to your specific performance.
Knowledge of Climate Change Impacts

- Could establish a legal duty beyond meeting codes and standards.
- Places on design professional a duty to design or duty to inform.
- Requires that knowledge (or inferred knowledge) of information that misrepresented risks be addressed.

Applicable Codes and Regulations

- Failure to design to codes and regulations could be negligence per se.
- Regulations may include narrative requirements, general duties, or references to private codes.
- A duty to identify and address risks that are reasonably quantifiable and well-understood may be required.
Changing the Standard of Care

Industry Custom
• Prevailing industry custom offers courts a useful guide to establishing the appropriate standard of care. But “there are precautions so imperative that even their universal disregard will not excuse their omission.”
• Adherence to common industry practice does not foreclose liability especially if the practice ignores an available and reliable means to avoid a safety risk.

Foreseeability of the Harm
• A court could require that the design professional anticipated that such an injury could occur.
• There will be a level of due diligence required to determine the appropriate design standards for climate resilience. As one case stated, “taking into account the best science is a responsibility…designing to existing codes is insufficient.”

REMEMBER: Compliance with zoning, building codes and other regulations can help determine the appropriate standard of care for design services but compliance alone will not necessarily shield a design professional from liability for damages resulting from failure to account for climatic changes not considered or evident at the time of code adoption or that are anticipated during the expected life of the project or permit timeframe.
The Impact of Codes, Standards, and Government Regulations

Codes Set Minimum Standards

Increasingly court decisions have imposed liability on project owners and design professionals due to their failure to provide a design and project sufficient for the safety of people that would use a facility – even though the designer satisfied the applicable building codes.

Codes Set Minimum Standards

- Reliance on industry standards does not mean that the design professional will not also be judged by whether the design was reasonable under the specific circumstances.
- Even if code requirements are satisfied, the standard of care may render parties liable for not designing appropriate for conditions that could foreseeably lead to injury.
Federal Forecasts
The U.S. Government's National Climate Assessment released November 2018 estimated that sea levels would rise six to 14 inches between 2000 and 2050, and as much as 4 feet by 2100. The Assessment also stated that coastal regions will face more flooding from more frequent and destructive storms.

ASCE 24, Flood Resistant Design and Construction
American Society of Civil Engineers publishes ASCE 24. It establishes the minimum requirements and expected performance for the siting, design, and construction of buildings and structures in flood-hazard areas that are subject to building code requirements.

• Buildings and structures that fall within the scope of the International Building Code (IBC) that will be located in a flood hazard area must meet the requirements set by the ASCE 24.
• The International Residential Code requires that dwellings in floodways be designed consistent with the ASCE 24 requirements.

Executive Order 13690 and FEMA Regulations
President Obama issued Executive Order (EO) 13690 on January 30, 2015, directing FEMA to require higher elevation foundations for structures being built in areas that have flooded.

• Would require design action even though the project was listed on a map location requiring no action.
• Stated that the floodplain must be established using one of several different approaches, the most significant of which is "adding an additional 2 feet to the base flood elevation for noncritical actions and by adding an additional 3 feet to the base flood elevation for critical actions."
Executive Order 13690 and FEMA Regulations

Before the new FEMA regulations could be adopted and implemented, President Trump, on August 15, 2017, issued an Executive Order revoking EO 13690.

- The president determined that the additional cost of compliance would undermine economic growth and interfere with private decision-making.
- FEMA then rescinded the new regulations that would have established a Federal Flood Risk Management Standard.

Military Funding Bill


- It authorizes DoD to prepare for utility disruptions through alternative energy sources and plan new facilities to meet changing environmental conditions.
- Proposed projects that would be sited within or partially within a 100-year floodplain must be assessed for vulnerability and alternative construction sites examined.
- Mission-critical facilities must have a three-foot freeboard. Other DoD facilities have to be built two feet above the base flood elevation.
Possible Contractual Protections

Informed Consent
The Design Professional will design in compliance with existing codes and regulations in place and applicable to the design services at the time the design is prepared. Project Owner understands that the Design Professional cannot anticipate changes in the project’s site or environment unless the Project Owner specifically has those possible changes analyzed by a consultant and contractually requires that the changes be considered during the design stage of the project. Project Owner recognizes that the Design Professional has a right to rely on the information provided through the Project Owner by the Project Owner’s consultant.

Possible Contractual Protections

Disclaimers
During the Project design, Design Professional shall examine current codes and standards and shall use professional skill and care to design Project to meet the requirements of current codes and standards identified as applicable to the Project. Design Professional by training and experience does not possess the expertise to assess the effects of climate change or extreme climate events not addressed by current codes and standards on the Project and assumes no responsibility beyond the professional skill and care in designing to current codes and standards.

Possible Contractual Protections

Waivers
Because disruptive climate events are unforeseeable at the time this contract for services was negotiated, Project Owner agrees that it will waive any claim against the Design Professional related to climate events that exceed those addressed by existing codes and standards. Project Owner waives all consequential damages caused by disruptive climate events that are not identified in the contract as needing to be addressed by the Design Professional. Consequential damages include but are not limited to loss of use, income, profit, financing, business or reputation.
Possible Contractual Protections

Limitation of Liability

Project Owner limits the Design Professional’s liability to the Project Owner and anyone claiming through the Project Owner for costs, losses, or damages resulting from changes in the environment and site that exceed existing and applicable codes and are not identified at the time of the design as design parameters. Design Firm’s sole liability will be based on actual damages to the extent caused by the Design Firm’s failure to design to existing and applicable codes.

Possible Contractual Protections

Contractual Indemnity Obligation

In recognition of Project Owner’s decision to have Design Professional design only to existing codes and standards, Project Owner agrees to defend Design Professional against any third-party claims alleging harm caused by Design Professional’s failure to design to climate events not addressed by existing codes and standards and to indemnify Design Professional for any costs, losses, or damages to Design Professional resulting from such allegations.

Possible Contractual Protections

Prohibition of Third-Party Beneficiaries

Services provided by the Design Professional are solely for the Project Owner’s benefit and no third party is granted the right to rely on the design services provided by Design Professional.
Compliance with zoning, building codes and other regulations can help determine the appropriate standard of care for design services but compliance alone will not necessarily shield a design professional from liability for damages resulting from failure to account for climatic changes not considered or evident at the time of code adoption or that are anticipated during the expected life of the project or permit timeframe.

Your Challenges

Design firms cannot rely on codes and standards to meet their professional obligation to design for public health, safety, and welfare. They must understand their legal duty to meet an ever-changing standard of care based on the ability of the profession as a whole to respond to climate change in a way that puts the security and well-being of users and the community above the immediate financial interests of the client to design to minimum standards.
Design Liability in a Changing Climate

This concludes a course approved by:
The American Institute of Architects Continuing Education Systems

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